IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

pplicant:

Richard I. Masel et al.

Senial No.:

10/578,055

hf. No.:

4911

For:

FORMIC ACID FUEL CELLS AND

CATALYSTS

July 27, 2006

Art Unit:

1745

Examiner:

Unknown

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July 31, 2007

Date

Attorney for Applicant(s) Registration No. 40,607

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

This IDS is submitted under 37 C.F.R. §1.97(b) within any of the following time periods, whichever occurs

- (a) within three months of either the filing date of the application or the date of entry into the national stage; or
- before the mailing date of First Office Action on the merits (i.e., not including actions such as restriction requirements); or
- before the mailing of a First Office Action after the filing of a Request for Continuing Examination.

Applicant(s) submit herewith Form PTO-1449 (Information Disclosure Citation) together with copies of foreign patents, publications or other information of which applicant(s) are aware, which applicant(s) believe may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 C.F.R. §1.56. Applicant(s) respectfully submit that the citation of any reference on Form PTO-1449 does not constitute an admission that the reference qualifies as prior art.

It is requested that the information disclosed on the enclosed Form PTO-1449 be made of record in this application.

Copies of the all cited references can be found in application Serial No. 10/817,361, filed April 2, 2004; application Serial No. 10/407,385 now U.S. Patent No. 7,132,188; and in application Serial No. 10/664,772; which the present applications claim priority on (see, 37 C.F.R. §1.98(d)) except for the following references: GB1292791 and GB1273045 and 6,485,851 which are provided herewith.

The Commissioner is hereby authorized to charge any additional fees which may be required to this application under 37 C.F.R. §§1.16-1.17, or to credit any overpayment, to Deposit Account No. 07-2069. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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Chicago, Illinois 60606

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Thomas R. Fitzsimons, Reg. No, 40,607

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U.S. PATENT DOCUMENTS Filling Date: May 2, 2006 Group: 1745											
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8	+	3,297,487		Pomeroy	=			 			
-	╁┼	3,506,494		Adlhart	ot al.			 			
_	++	3,711,385		1/16/1973 Beer							
	4,039,409 08/02/1977 LaConti et al.										
	₩	4,039,409		McNicol e				 			
-	₩	4,127,468	↓	Alfenaar e				 			
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	${f H}$	4,431,750						 			
	┼┼	4,447,506	1	Luczak et				<u> </u>			
	igoplus	4,457,823	<u> </u>	LaConti et							
	igapha	4,457,986		Bindra et a							
	$oxed{+}$	4,478,917		Fujita et a				<u> </u>			
	\sqcup	4,797,380		Motoo et a				<u> </u>			
	igapha	4,806,515		Luczak et	al.			ļ			
	Щ	4,822,699		Wan et al.				<u> </u>			
	igspace	4,493,878		Horiba et	al.			<u> </u>			
	Щ.	5,004,424		Larminie							
	Щ	5,024,905	1	Itoh et al.							
	Щ	5,096,866	1	Itoh et al.							
	Щ	5,183,713 02/02/1993 Kunz									
	Ш	5,208,207									
	5,225,391 07/06/1993 Stonehart et al.										
		5,246,791	l	Fisher et a							
9	Щ		11/15/1994	Yamada e							
			02/28/1995	Mayer et a		<u></u>					
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	\prod		02/04/1997	Surampud							
		5,773,162	1	Surampud							
		5,856,036	01/05/1999	Smotkin e	al.						
\sqrt{Z}		5,885,729	03/23/1999	Marchetti							
V		5,904,740	05/18/1999	Davis et a							
/MW/		6,007,934	12/28/1999	Auer et al.							
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		/MW/ 1273045	May 3, 1972	Great Brit	ain						
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)											
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Attorney Docket No.: 1201.68586 Serial No.: 10/578,055 Form PTO-1449 U.S. Department of Commerce Patent and Trademark Office (Rev. 8-88) Applicant: Richard I. Masel et al. INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) Filing Date: May 2, 2006 Group: 1745 U.S. PATENT DOCUMENTS Examiner Filing Date Initial* Document Number Date Name Class Subclass If Appropriate /NW/ 6.020.083 02/01/2000 Breault et al. 6,146,782 | 11/14/2000 Wendt et al. 6,165,635 12/26/2000 Auer et al. 6.248.460 | 06/19/2001 Surampudi et al. 6,284,402 09/04/2001 Mallouk et al. 6,326,098 | 12/04/2001 Itoh et al. 6,387,557 05/14/2002 Krasij et al. 6.432.284 | 08/13/2002 Narayanan et al. 6,447,941 09/10/2002 Tomimatsu et al. 6,458,479 10/01/2002 Ren et al. 6,492,147 12/10/2002 Imamura et al. 6,492,052 12/10/2002 Ren 6.495.278 | 10/01/2002 Schmid et al. 6,498,121 12/24/2002 Gorer 6,517,965 02/11/2003 Gorer 6,533,827 04/19/2003 Cisar et al. 6,649,300 11/18/2003 Ito et al. 6,660,680 12/09/2003 Hampden-Smith et al. 6,670,301 12/30/2003 Adzic et al. 6,686,308 02/03/2004 Mao et al. 6,723,678 04/20/2004 Gorer 6,770,394 08/03/2004 Appleby et al. /MW/ 6,924,055 08/02/2005 Hirsch et al. FOREIGN PATENT DOCUMENTS Translation **Document Number** Date Subclass Yes No Country Class OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Papageorgopoulos, D. et al.; "CO Tolerance of Pd Rich Platinum Paladium Carbon Supported Electrocatalysts fro PEMFC Applications", Journal of the Electrochemical Society, in press, August 2002, pp. 1-22. Adzic, R. et al.: "Structural Effects in Electrocatalysis", J. Electroanal. Chem., 1983, pp. 79-88. Avramov-lvic, M. et al.; "The electrocatalytic properties of the oxides of noble metals in the electrooxidaton of methanol and formic acid", Electrochimica Acta, 2001, pp. 3175-3180 Baldauf, M. et al.; "Formic Acid Oxidation on Ultrathin Pd Films on Au(hkl) and Pt(hkl) Electrodes", J. Phys. Chem., 1996, pp. 11375-11381. Becerik, I. et al.; "Electro-oxidation of Formic Acid on Highly Dispersed Platinum and Perchlorate Doped Polypyrrole Electrodes", Journal of The Electrochemical Society, 2001, pp. D49-D54. Capon, A. et al.; "The Effect of Strong Acid on the Reactions of Hydrogen And Oxygen on the Noble Metals a Study Using Cyclic Voltammetry and a New Teflon Electrode Holder", Electroanalytical Chemistry and Interfacial /MW Electrochemistry, 1972, pp. 275-286. 03/30/2008 /Monique Wills/ Examiner **Date Considered** *Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through ALL REFERENCE OF THE STREET OF

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Examiner Initial*	Document Number	Date		Name	Class	Subclass		g Date	
	2004/0115518		Masel et al.	Hame	Class	Oubclass	class If Appropriat		
	2003/0170508		Beckmann e	t al		1			
	6,485,851		Narayanan e			1			
FOREIGN	PATENT DOCUMENTS		1			l			
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	ОТ	HER DOCUME	ENTS (Includir	ng Author, Title, Date, Pertiner	nt Pages, I	Etc.)			
	Capon, A. et al.; "The O	xidation of For	mic Acid on N	oble Metal Electrodes II. A Co	mparison	Of the Beha	viour of	Pure	
		-		cial Electrochemistry, 1973, pp					
	Platinum Electrodes", E	lectroanalytica	l Chemistry ar	oble Metal Electrodes III. Intend Interfacial Electrochemistry	, 1973, pp	. 205-231.		ŀ	
	Capon, A. et al.; "The O Electroanalytical Chemi	xidation of For stry and Interfa	mic Acid on N acial Electroch	oble Metal Electrodes IV. Plat emistry, 1975, pp. 285-305.	inum and	Palladium E	lectrode	es",	
	Chi, N. et al.; "Electrocat 21-26.	alytic oxidation	of formic acid	by Pt/Co nanoparticles", Cata	lysis Lette	rs Vol. 71, N	o. 1-2, 2	001, pp.	
	Clavilier, J. et al.; "Heterogeneous electrocatalysis on well defined platinum surfaces modified by controlled amounts of irreversibly absorbed adatoms", Part I: Formic Acid Oxidation on the Pt (III) –Bi system. <i>J. Electroanal. Chem.</i> , 1989, pp. 89-100.								
	Climent, V. et al.; "Electrocatalysis of formic acid and CO oxidation on antimony-modified Pt(111) electrodes", Electrochimica Chemistry, 1993, pp. 1403-1414.								
	El-Shafei, A. et al.; "Elec	ctrocatalytic ox	idation of form	nic acid on Pt binary and terna	ry electro	des in H₃PO	4", Joun	nal of	
	Electroanalytical Chemistry, 1993, pp. 159-165. El-Shafei, A.; "Study of nickel upd at a polycrystalline Pt electrode and its influence on HCOOH oxidation in acidic and								
				hemistry, 1998, pp. 81-89.			=		
	Fernandez-Vega, A. et al.; "Heterogeneous electrocatalysis on well defined platinum surfaces modified by controlled amounts of irreversibly absorbed adatoms", Part II: Formic Acid Oxidation on the Pt (100) Sb system. <i>J. Electroanal. Chem.</i> , 1989, pp. 101-113.								
		lectrocatalytic	Oxidation of S	small Carbohydrate Fuels at P	t-Sn Modi	fied Electrod	les", <i>J. F</i>	Phys.	
			direct formic	acid fuel cell", Journal of Pow	er Source:	s, 2004, pp.	119-124		
	Ha, S. et al.; "Methanol 2002, pp. 655-659.	conditioning fo	r improved pe	rformance of formic acid fuel of	cells", Jou	mal of Powe	er Sourc	es,	
	Harmsen, J. et al.; "Kine Applied Catalysis, 1997		or wet air oxida	ation of formic acid on a carbo	n support	ed platinum	catalyst	,	
	Hartung, T. et al.; "Catal Electroanal. Chem., 198	lytic Effects of I	Hg an Ti Subn	nonolayers on the Electrooxid	ation of Fo	ormic Acid o	n Pt", <i>J</i> .		
		ation of formic	acid on Pt(111) electrodes modified by irreve	ersibly abs	sorbed tellur	ium", <i>Jo</i>	oumal of	
		ation of formic a	acid on Pt(100) electrodes modified by irreve	ersibly abs	sorbed tellur	ium", <i>Jo</i>	umal of	
		uctured platinu	ım as an elect	rocatalyst for the electrooxidat	tion of forr	mic acid", <i>Jo</i>	umal of		
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Form PTO-1449 U.S. Department of Commerce (Rev. 8-88) Patent and Trademark Office INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)				Attorney Docket No.: 1201.68586 Se				Serial No.: 10/578,055		
				Applicant: Richard I. Masel et al.						
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	OTHER	DOCUMENTS	(Including A	uthor, Title, Dat	te, Pertinent Pag	es, Etc.)				
	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Beden, B. et al.; "Electrocatalytic Activity of Noble Metals for the Oxidation of Formate in Neutral Medium", J. Electroanal. Chem., 1979, pp. 127-131.						n", <i>J</i> .			
	Llorca, M. et al.; "Formio Chemistry, 1994, pp. 15	Llorca, M. et al.; "Formic acid oxidation on Pd _{ad} +Pt(100) and Pd _{ad} + Pt(111) electrodes", <i>Journal of Electroanalytical Chemistry</i> , 1994, pp. 151-160.								
	Llorca, M. et al.; "Formic acid oxidation on Pt(111) electrodes modified by irreversibly absorbed selenium", <i>Journal of electroanalytical Chemistry</i> , 1994, pp. 217-225.									
	McGovern, M. et al.; "Effects of Nafion as a binding agent for unsupported nanoparticle catalysts", <i>Journal of Power Sources</i> , 2003, pp. 35-39.									
	Shen, P. et al.; "Performance of CO-electrodeposited Pt-Ru/WO ₃ electrodes for the electrooxidation of formic acid at room temperature", <i>Journal of Electroanalytical Chemistry</i> , 1995, pp. 223-225.								id at	
		Waszczuk, P. et al.; "A nanoparticle catalyst with superior activity for electrooxidation of formic acid", <i>Electrochemistry Communications</i> , 2002, pp. 599-603							mistry	
		Rhee, Y. et al.; "Crossover of formic acid through Nafion® membranes", Journal of Power Sources, 2003, pp. 35-38.								
		Pron'kin, S. et al.; "Nanoparticle of Pt hydrosol immobilized on Au support: an approach to the study of structural effects in electrocatalysis", <i>Electrochimica Acta</i> , 2001, pp. 2343-2351.								
		Rice, C. et al.; "Catalysts for direct formic acid fuel cells", Journal of Power Sources, 2003, pp. 229-235.								
	_ <u></u>	Rice, C. et al.; "Direct formic acid fuel cells", <i>Journal of Power Sources</i> , 2002, pp. 83-89.								
	Electrochimica Acta, Vo	Gasteiger`, H. et al.; "Electro-Oxidation of Small Organic Molecules on Well-Characterized Pt-Ru Alloys", Electrochimica Acta, Vol. 39, No. 11/12, 1994, pp. 1825-1832.								
	manatomic steps", Journ	Smith, S. et al.; "Structural effects on the oxidation of HCOOH by bismuth modified Pt(111) electrodes with (110) manatomic steps", <i>Journal of Electroanalytical Chemistry</i> , 1999, pp. 43-49.								
		Shibata, M. et al.; "Electrocatalysis by Ad-Atoms", Part XXII: Shole Control By Ad-Atoms on HCOOH Oxidation. <i>J. Electroanal Chem.</i> , 1988, pp. 253-264.							J.	
	Chen, M. et al.; "Enhancement of the electrochemical oxidation of formic acid. Effects of anion absorption and variation of rotation rate", <i>Electrochimica Acta</i> , 2001, pp. 3481-3492.									
Examiner		Dat	Date Considered							
*Examine	Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.									

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Form PTO-1449 U.S. Department of Commerce (Rev. 8-88) Patent and Trademark Office INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)				Attorney Docket No.: 1201.6	Serial No.: 10/578,055					
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	Document Number	Date	Country		Class	Subclass	Yes	No		
						i				
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)										
	Beltowska-Brzezinska M. et al.; "The Influence of Upd-Lead on the Absorption of Formaldehyde, Formic Acid and Methanol on Pt In Acid Solution", <i>Electrochimica Acta</i> , Vol. 30, No. 11, 1985, pp. 1465-1471.									
	Xia, X.; "New insights into the influence of upd Sn on the oxidation of formic acid on platinum in acidic solution", Electrochimica Acta, 1999, pp. 1057-1066.									
	Xiang, J. et al.; "Investigation of the mechanism of the electrochemical oxidation of formic acid at a gold electrode in sulfuric acid solution", <i>Journal of Electroanalytical Chemistry</i> , 2001, pp. 95-100.									
	Yang, Y. et al.; "Surface modification and electrocatalytic properties of Pt(100), Pt(110), Pt(320) an Pt(331) electrodes with Sb towards HCOOH oxidation", <i>Electrochimica Acta</i> , 2001, pp. 4339-4348.									
	Sobkowski, J. et al.; "The Behaviour of Formic Acid on a Rhodium Electrode", <i>J. Electroanal. Chem.,</i> 1978, pp. 309-320.									
	Zhang, X. et al.; "Electrocatalytic Oxidation of Formic Acid on Ultrafine Palladium Particles Supported on a Glassy Carbon", <i>Electrochimica Acta</i> , Vol. 40, No. 12, 1995, pp. 1889-1897.									
				III. Preparation of Ad-Electrod oanal. Chem. 191, December			s for Met	thanol		
	M. Watanabe, "Electroc with Ad-Atoms of the IV	atalysis By Ad- th and the Vth	Atoms, Part X Groups," J. El	XIII. Design of Platinum Ad-El ectroanal. Chem. 250, Februar	ectrodes y 1988, p	for Formic <i>i</i> . 117-125.	Acid Fue	el Cells		
	Zhu, Y. et al.; "High pow	er density dire	ct formic acid	fuel cells", Journal of Power So	ources, 20	004, pp. 8-1	4.			
Examiner Date Considered										
*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.										

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	Document Number	Date	Country		Class	Subclass	Yes	No		
<u> </u>			<u> </u>							
		****	•	Author, Title, Date, Pertiner						
		A. Wieckowski and R. I. Masel, , "UHV and electrochemical studies of CO and methanol adsorbed at platinum/ruthenium surfaces, and reference to fuel cell catalysis," Electrochimica Acta 47, 22-23, 3637-3652 (2002).								
	and formic acid on Pt-R	N. Markovic, H. Gasteiger, P. Ross, X. Jiang, I. Villegas and M. Weaver, "Electro-oxidation mechanisms of methanol and formic acid on Pt-Ru alloy surfaces," Electrochimica Acta, 40, 91-98, (1995).								
	M. Arenz, V. Stamenkovic, T. J. Schmidt, K. Wandelt, P. N. Ross and N. M. Markovic, "The electro-oxidation of formic acid on Pt Pd single crystal bimetallic surfaces," Physical Chemistry Chemical Physics, 5, 4242, (2003).									
	N. Watanabe, K. Iwatsu, A. Yamakata, T. Ohtani, J. Kubota, J. N. Kondo, A. Wada, K. Domen and C. Hirose, "SFG study of formic acid on a Pt(110)-(1x2) surface," Surf. Sci., 651, 357-358, (1996).									
	S. W. Jorgensen and R. J. Madix,, "Active oxygen on Group VIII metals: activation of formic acid and formaldehyde on Pd(100)," J. Am. Chem. Soc., 110, 397, (1988).									
	F. Solymosi and I. Kovacs, "Adsorption and reaction of HCOOH on K-promoted Pd(100) surfaces," Surf. Sci., 259, 95, (1991).									
	Mo(110)," J. Phys. Cher	C. Xu and D. W. Goodman, "Adsorption and Reaction of Formic Acid on a Pseudomorphic Palladium Monolayer on Mo(110)," J. Phys. Chem., 100, 245, (1996).								
	R. R. Adzic, A.V. Tripko Oxygen Reduction on S 79-88, (1983).	R. R. Adzic, A.V. Tripkovic and N. M. Markovic, "Structural Effects in Electrocatalysis, Oxidation of Formic Acid and Oxygen Reduction on Single-Crystal Electrodes and the effects of Foreign Metal Adatoms," Electroanal. Chem., 150 79-88, (1983).								
	Guo-Qiang Lu, Alechia (Palladized Platinum Ele	Guo-Qiang Lu, Alechia Crown, and Andrzej Wieckowski, "Formic Acid Decomposition on Polycrystalline Platinum and Palladized Platinum Electrodes," J. Phys. Chem. B 1999, 103, pp. 9700-9711.								
	Weber, M.; Wang, J.T.; Time Mass-Spectrometr	Weber, M.; Wang, J.T.; Wasmus, S; Savinell, R.F.; "Formic Acid Oxidation in a Polymer Electrolyte Fuel Cell: A Real-Time Mass-Spectrometry Study," J. Electochem. Soc., 1996, 143(7), L158-I160.								
		P. Waszczuk, J. Solla-Gullón, H.S. Kim, Y.Y. Tong, V. Montiel, A. Aldaz, and A. Wieckowski, "Methanol Electrooxidation on Platinum/Ruthenium Nanoparticle Catalysts," Journal of Catalysis 203, pp. 1-6 (2001).								
	Gdowski, G.E.; Fai, J.A.; Maxid, R.J.; Reactive Scattering of Small Molecules from Platinum Crystal Surfaces: D ₂ CO, CH ₃ , CH ₃ OH, HCOOH and the Nonanomalous Kinetics of Hydrogen Atom Recombination, Surf. Sci., 1983, 127(3) 541-54.									
Examiner	/Monique Wills/		Ţ	Date Considered	03/30/20	80	-			
*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.										